



ALABAMA'S PREPAID AFFORDABLE COLLEGE TUITION PROGRAM

**ANNUAL ACTUARIAL VALUATION
SEPTEMBER 30, 2008**

Prepared by
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January 31, 2009

Board of Trustees
Alabama's Prepaid Affordable College Tuition Trust Fund
State Treasurer's Office
600 Dexter Avenue, Suite S-106
Montgomery, Alabama 36104

Ladies and Gentlemen:

We have completed our actuarial analysis of Alabama's Prepaid Affordable College Tuition Trust Fund ("the Fund") as of September 30, 2008. This report presents our findings with respect to the Fund's expected cash flows and the status of the Fund.

This analysis of the funding of the Fund was prepared for the Board in accordance with generally accepted actuarial principles and practices commonly applicable to similar types of arrangements.

The purpose of our actuarial analysis is to provide a long-term view of the Fund's assets and liabilities. Because the Fund undertakes liabilities that in some cases will not be paid out until over 20 years in the future, such a long-term analysis is critical to the proper management of the Fund.

As of September 30, 2008, the expected value of all liabilities is \$1,077,972,332 and the value of assets including future revenue is \$771,725,841, resulting in an actuarial deficit of \$306,246,491. Liabilities are 67.2% funded.

We caution you in interpreting these results to keep in mind that this deficit is an actuarial deficit. Our projections are based on a number of uncertain assumptions, including the future course of tuition increases in Alabama and returns on the Fund's assets. Actual events may vary significantly from our projections – either better or worse than our projections. These variances may result in material changes to future actuarial analyses. Nevertheless, the current deficit is severe, and the Board must take

immediate, significant and material action to ensure that all PACT beneficiaries receive their benefits.

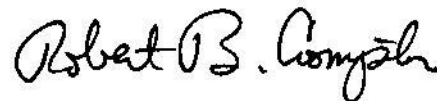
The actuarial status will change from year to year due to positive and negative cash flows and due to the change in the present value of future contract usage caused by the passage of time. The actuarial status will also change due to the variance of experience from the assumptions. These variances include tuition increases, investment income, and timing of benefit payments.

A more complete understanding of this “point-in-time” approach can be gained by reviewing prior years’ actuarial reports and analyzing how the surplus and deficit amounts have changed over time. In addition, this report should be read in its entirety so that our projections can be properly interpreted.

* * * * *

We appreciate the opportunity to serve the Alabama Prepaid Affordable College Program.

Very truly yours,

A handwritten signature in black ink that reads "Robert B. Crompton". The signature is written in a cursive, flowing style.

Robert B. Crompton, FSA, MAAA

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I. EXECUTIVE SUMMARY

The following are the key findings of our analysis.

Status of the Fund

As of September 30, 2008, the Fund's liabilities exceed its assets by \$306,246,491.

Item	Value as of September 30, 2008
Total Assets	\$771,725,841
Total Liabilities	\$1,077,972,332
Actuarial Deficit	(\$306,246,491)
Funding Ratio	67.2%

Key economic assumptions are listed below.

Key Assumptions	
Yield on Investments	
All years	8.02%
Tuition Inflation	
2-Year colleges	7.25%
4-Year colleges & universities	7.25%

The assumption for investment returns is based on the recommendation of the Fund's investment consultant, Callan Associates, Inc. The tuition inflation assumptions are based on a combination of statistical models of tuition increases and on actuarial judgment. Our statistical models also use information from the past 25 years. The rates shown in the table above represent our long-term average estimate of tuition inflation

Please see the *Actuarial Methods and Assumptions* section on page 6 for a more detailed discussion of these items.

A summary balance sheet as of September 30, 2008 is shown in the table below.

Value as of September 30, 2008	Assets and Liabilities
Assets	
Short term assets	\$23,836,601
Fixed Income Securities	
Domestic	155,695,312
International	680,613
Derivatives	<u>26,698,338</u>
Total Fixed Income	183,074,263
Equities	
Domestic	318,603,425
International	<u>103,768,952</u>
Total Equities	422,372,377
Securities Lending Collateral	85,906,716
Accrued Interest	2,577,842
Recoverable Taxes	304,961
Receivables	- 0 -
Equipment	<u>- 0 -</u>
Total Short-term & Invested Assets	718,072,760
Actuarial Value of Future Contract Revenue	
Gross	54,630,533
Less Administrative Fees	<u>977,452</u>
Net Contract Revenues	<u>53,653,081</u>
Total Assets	<u><u>\$771,725,841</u></u>
Liabilities and Deficit	
Actuarial Value of Future Benefits	\$933,072,323
Other Liabilities	<u>144,900,009</u>
Total Liabilities	1,077,972,332
Actuarial Deficit	<u>(306,246,491)</u>
Total Liabilities and Deficit	<u><u>\$771,725,841</u></u>
Net Assets Available for Benefits	\$573,172,751
Funded Ratio	67.2%
Funded ratio = (net assets available + net contract revenues) ÷ actuarial Liabilities	

II. RELIANCES & COMPLIANCE WITH ACTUARIAL STANDARDS OF PRACTICE

In making the projections on which this report is based, we relied on the following information as indicated below.

- Weighted Average Tuition at Alabama colleges and universities, including headcounts as of September 30, 2007, supplied by the Alabama Commission on Higher Education.
- Market value of assets of the Trust Fund, supplied by PACT personnel.
- Actual inventory of contracts by category, enrollment period, payment method and anticipated matriculation year, supplied by the PACT records administrator, HealthData, Inc.
- Information regarding likely future investment returns on the Trust Fund, supplied by the Fund's investment consultant, Callan Associates, Inc.
- Assumptions regarding the Fund's anticipated asset allocation are derived from the Fund's Investment Policy Statement.

There are no actuarial standards of practice that apply specifically to prepaid tuition plans. However, there are two general standards that we believe apply:

- Actuarial Standard of Practice #23 "Data Quality". This standard sets guidelines on review of data supplied by a third-party. We have performed reasonableness and consistency checks on the data supplied to us by the records administrator, and are in compliance with this standard. Our review of the data was not an audit of the data.
- Actuarial Standard of Practice #41 "Actuarial Communications". This standard sets general guidelines for actuarial communications. This report is in compliance with this standard.

III. SUMMARY OF PARTICIPANT DATA AND INVESTED ASSETS

Contract Data

Data on the number of outstanding contracts and payments was provided by the Fund's records administrator, HealthData, Inc. The tables below summarize the data provided concerning this.

Distribution of Active Contracts by Projected First Year in College			
Projected Year of College Enrollment	Number of Contracts	Projected Year of College Enrollment	Number of Contracts
Prior to 2000	501	2013	2,645
2000	642	2014	2,309
2001	816	2015	2,158
2002	976	2016	1,945
2003	1,315	2017	1,790
2004	2,057	2018	1,668
2005	2,957	2019	1,493
2006	3,119	2020	1,195
2007	3,208	2021	1,011
2008	3,243	2022	643
2009	3,062	2023	490
2010	3,027	2024	423
2011	2,951	2025	270
2012	2,841	2026	65
Total Contracts			48,820

Distribution of Contracts by Year of Purchase			
Year of Purchase	Number of Contracts	Year of Purchase	Number of Contracts
1990	14,582	1999	2,531
1991	7,084	2000	2,979
1992	6,485	2001	3,792
1993	5,228	2002	3,730
1994	4,807	2003	2,258
1995	4,772	2004	1,605
1998	4,332	2005	1,192
1997	3,597	2006	1,277
1998	3,419	2007	1,319
Total Contracts			74,989

Assets

Fund Assets

The total market value of assets held (exclusive of contract receivables) as of September 30, 2008 is \$718,072,760. The allocation of these assets is shown in the table below.

Market value of assets held as of September 30, 2008		
	<u>Amount</u>	<u>% Of Total</u>
Short-term Assets	23,836,601	3.3%
Fixed Income	183,074,263	25.5%
Equities	422,372,377	58.8%
All Other Assets Held in Funds	<u>88,789,519</u>	<u>12.4%</u>
TOTAL	<u>\$718,072,760</u>	<u>100.0%</u>

Investment Strategy

The Fund's Investment Policy states, "A strategic asset allocation has been established based on the principle that individual asset classes can be combined to optimize the objectives of the Fund. The goal of this strategic asset allocation is a Fund that is efficient, well diversified, and manageable over the long term. The benefits of this diversification are reduced risk and improved investment return." The Fund's asset allocation has a target allocation by asset category as follows:

- U.S. Stocks 47%
- Non-U.S. Stocks 20%
- Fixed Income 23%
- Real Estate 10%

IV. ACTUARIAL METHODS AND ASSUMPTIONS

Methods

The actuarial method for the determination of the status of the Fund consists of projecting future tuition rates and future utilization of these contracts. The value of future benefits and revenues are determined using the time value of money.

For the projection of future benefits, the analysis proceeds as follows:

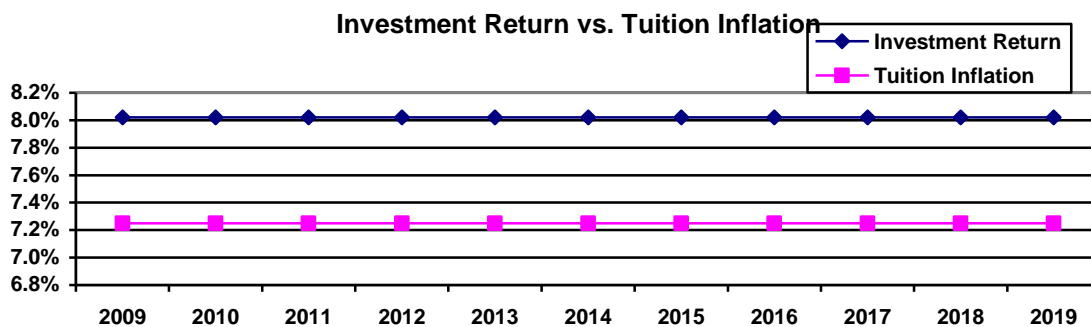
- Project future tuition rates for all years under consideration. Future tuition is based on the assumptions for tuition inflation.
- Determine the nominal cost of future use of contract benefits based on the assumptions regarding utilization of contracts and the length of time the average beneficiary will take to complete his college education.
- Determine the present value of future contract usage based on the investment yield assumptions.
- Perform projections for all of the Fund's beneficiaries to determine the status of the Fund.

Assumptions

Actuarial assumptions used to determine financial status of the Fund are of two general types: economic and demographic. Demographic assumptions determine the expected exposure to financial claims and generally answer the question “How and when will people use their contract?” Economic assumptions are concerned with the expected level of contract usage and answer the question “What is the expected value of contract usage?” The assumptions that we used were those that were approved by the PACT Board in consultation with Actuarial Resources Corporation.

Economic Assumptions

Economic assumptions are used to estimate the annual tuition rates at two and four-year colleges and Fund earnings on assets invested. The single most important indicator of the financial viability of the Fund is the relationship between projected investment returns and the projected tuition increases. The chart below shows the relationship over time of the investment return rates versus the tuition rates.



The following paragraphs describe the economic assumptions used in this study.

Annual Tuition Rates

Our assumptions for tuition were guided by our observations of historic increases, trends in appropriations for higher education and by statistical modeling. Our assumptions are shown below.

Tuition Inflation	
2-Year colleges	7.25%
4-Year colleges & universities	7.25%

We note that for 2-Year Colleges, tuition and fees are set by the Alabama State Board of Education, acting as the trustee for Alabama’s 2-year colleges. For 4-Year Colleges & Universities, tuition and fees are determined independently by each institution’s Board of Trustees.

Tuition Bias Toward Higher Cost Institutions

The Weighted Average Tuition ("WAT") is used to determine projected tuition payouts. Because purchasers have the opportunity to use the benefits at a school with tuition higher than the WAT, we have included an adjustment factor in our projections to account for this.

Bias Toward Higher Cost Institutions Factors	
Four-year universities	14.0%
Two-year colleges	2.0%

Fund Earnings Rate

Our assumption for investment returns is based on information supplied to us by the Fund's investment consultant, Callan Associates, Inc. Callan has informed us that their best estimate of likely returns over the next five years is 8.07%. Beyond five years, the assumption is based on historical norms and the Fund's historical results.

Investment Returns	
All years	8.02%

These returns are net after investment expenses.

Annual Expenses

As in prior years, we assume that all of the Fund's expenses are paid from the administrative fees assessed on contracts. Beginning in 2006, investment income is transferred to the Administrative Account for current liquidity needs including tuition benefits and expenses.

Demographic Assumptions

The demographic assumptions used in this report are based on our experience with similar types of liabilities. Our choice of assumptions is based on recent experience, historical data of the Fund and our best estimates as to future events. These assumptions are as follows:

Contract Terminations Due To Mortality and Disability

We assumed no contract terminations due to death or disability.

Other Contract Cancellations

We assumed that contracts would cancel according to the table below.

Contract Cancellation Table			
Type of Payment=>	Lump Sum	60 Monthly Payments	Extended Monthly Payments
Year of purchase	0.50%	5.00%	6.00%
Year of purchase+1	0.50%	2.00%	5.00%
Year of purchase+2	0.50%	1.00%	4.00%
Year of purchase+3	0.50%	1.00%	4.00%
Year of purchase+4	0.50%	1.00%	3.00%
Thereafter	0.50%	1.00%	2.00%

Utilization of Benefits

We assume that beneficiaries will enroll in college at the date indicated as their anticipated college entrance date.

For 4-year contracts, we assume that the average beneficiary will use 128 credit hours and 8 semester fee payments according to the following table. For 1-year contracts, we assume that the average beneficiary will use 32 credit hours and 2 semester fee payments. These assumptions are based on the Fund's experience to date for beneficiaries who have completed their contract usage either through graduation, depletion or expiration.

4-Year Contracts			1-Year Contracts	
Timing	Credit Hours	Fee Usage	Credit Hours	Fee Usage
Year 1	30	2 semesters	32	2 semesters
Year 2	30	2 semesters	Nil	Nil
Year 3	30	2 semesters	Nil	Nil
Year 4	30	2 semesters	Nil	Nil
Year 5	8	Nil	Nil	Nil

For contracts that are past the projected completion date, we assumed that their remaining benefits would be paid over four years with remaining credits spread equally over each year. For contracts that are past their anticipated entrance date, but not yet past their projected completion date, we assumed that their remaining benefits would be paid over the remaining period until their projected completion date.

Within an academic year, contract usage is assumed to be 45% for the fall semester, paid November 1, 45% for the spring semester, paid March 1 and 10% for the summer semester, paid August 1.

Two-Year College Participation

For 4-year contracts, we assumed that during the course of benefit usage, 10% of beneficiaries would attend two-year colleges. Projected benefit payments reflect the mix of two-year and four-year tuition costs.

For 1-year contracts, we assumed no benefits would be used at two-year colleges.

V. CHANGES IN ACTUARIAL ASSUMPTIONS FOR 2008

We made two changes to the assumptions used in projecting the status of the Fund. These changes are conservative when considered in aggregate. That is, they cause the actuarial deficit to be larger than it would have been without these changes. These changes are discussed below. These assumption changes that we made were those that were approved by the PACT Board in consultation with Actuarial Resources Corporation.

Changes in Investment Returns

We updated the assumption for investment returns based on the recommendation of the Fund's investment consultant. Current and prior assumptions are shown below.

Current Assumption	Prior Assumption
8.02% for all years	8.07% through 2011/12 8.50% thereafter

Change in Bias To Higher-Cost Institutions

We revised the assumptions to better reflect actual experience of the Fund.

Current Assumption	Prior Assumption
14.0% for 4-year schools 2.0% for 2-year schools	11.0% for 4-year schools 3.0% for 2-year schools

Dollar Effect of Change in Assumptions

The effect of these changes is as follows:

- | | |
|------------------------------------|-----------------------------------|
| •Investment returns: | \$ 13,723,002 increase to deficit |
| •Bias to Higher-Cost Institutions: | \$ 25,847,181 increase to deficit |
| •Aggregate change: | \$ 39,570,183 increase to deficit |

If assumptions had been the same as last year, the Program's deficit would have been:

(\$266,676,308)

VI. STATUS OF THE FUND AS OF SEPTEMBER 30, 2008

In determining the status of the Fund, we estimated the future disbursements for higher education expenses of beneficiaries and refunds for terminated contracts. We also projected the future assets based on current assets and expected earnings on assets. We believe these estimates are reasonable based on the information available and our past experience and judgment.

The estimates of the prospective assets and liabilities of the Fund are summarized in the table on the following page and demonstrate the financial position of the Fund. The value of all assets including future contract payments is \$771,725,841 while the expected value of all liabilities is \$1,077,972,332. The resulting actuarial deficit is \$306,246,491.

The actuarial status will change from year to year due to positive and negative cash flows and due to the change in the present value of future contract usage and expense payments because of the passage of time. The actuarial status will also change due to the variance of experience from the assumptions. These variances include tuition increases, investment income, and expenses.

Finally, the status will also change due to the growth of the program and due to updates to assumptions reflecting the Fund's emerging experience. The changes for the year ending September 30, 2008 are summarized in the table below.

Annual Change of Status	
Status at September 30, 2007	(\$19,741,680)
Projected Change to September 30, 2008	(1,593,154)
Effect of New Contracts	(246,424)
Loss from Unfavorable Tuition Inflation	(42,468,617)
Loss due to Unfavorable Investment Experience	(194,004,783)
Change in Assumptions	(39,570,183)
Other	<u>(8,621,650)</u>
Actuarial deficit at September 30, 2008 ¹	<u><u>(\$306,246,491)</u></u>

¹ Based on assumptions described above. Assumptions will change over time as experience becomes more credible.

The table below presents the Fund's projected assets, projected cash flows, projected investment income and projected funded status. These projections are as-of September 30, 2008, and are based on the contracts in place at that time. The effects of future contract sales are not included.

Fiscal Year Ending	Payments Into Trust Fund	Payments Out of Trust Fund	Investment Income	End of Year Assets Held	Assets Held Plus Contract Revenue	End Of Year Liabilities	Funded Ratio
2008				718,072,760	771,725,841	1,077,972,332	67.2%
2009<1>	18,862,924	228,701,162	42,860,316	551,094,838	589,249,759	920,057,219	64.0%
2010	10,498,455	105,526,384	38,799,556	494,866,466	525,118,904	882,457,122	59.5%
2011	8,551,395	107,403,376	34,100,011	430,114,496	453,865,814	839,862,557	54.0%
2012	6,756,757	110,233,651	28,673,214	355,310,816	373,905,409	790,859,091	47.3%
2013	4,871,359	102,747,257	22,996,931	280,431,849	295,423,838	745,817,206	39.6%
2014	3,952,021	104,971,110	16,815,762	196,228,522	208,296,576	694,811,491	30.0%
2015	3,367,876	104,391,660	10,058,077	105,262,816	114,781,992	640,315,403	17.9%
2016	2,818,904	102,865,632	2,814,992	8,031,079	15,369,703	583,050,894	2.6%
2017	2,303,548	99,651,995	(4,836,535)	(94,153,903)	(88,633,176)	524,576,046	- 16.9%
2018	1,869,582	95,788,498	(12,841,325)	(200,914,144)	(196,903,503)	465,485,099	- 42.3%
2019	1,490,543	93,076,759	(21,265,782)	(313,766,143)	(310,991,504)	404,520,664	- 76.9%
2020	1,141,754	89,857,689	(30,159,627)	(432,641,704)	(430,837,744)	342,058,500	- 126.0%
2021	837,438	84,868,875	(39,429,784)	(556,102,926)	(555,030,227)	279,852,296	- 198.3%
2022	566,460	78,890,780	(49,016,279)	(683,443,524)	(682,877,434)	218,962,667	- 311.9%
2023	352,084	68,353,617	(58,660,649)	(810,105,706)	(809,863,080)	164,304,597	- 492.9%
2024	181,030	56,486,423	(68,170,820)	(934,581,918)	(934,510,011)	117,785,914	- 793.4%
2025	62,958	45,882,501	(77,563,208)	(1,057,964,670)	(1,057,953,342)	78,736,717	-1,343.7%
2026	11,559	35,017,143	(86,854,045)	(1,179,824,299)	(1,179,824,299)	48,028,302	-2,456.5%
2027	- 0 -	24,688,518	(96,034,113)	(1,300,546,930)	(1,300,546,930)	25,779,449	-5,044.9%
2028	- 0 -	16,070,637	(105,230,866)	(1,421,848,434)	(1,421,848,434)	10,849,321	-13,105.4%
2029	- 0 -	8,368,459	(114,531,712)	(1,544,748,605)	(1,544,748,605)	2,851,510	-54,173.0%
2030	- 0 -	2,587,955	(124,056,523)	(1,671,393,083)	(1,671,393,083)	324,561	-514,970.4%
2031	- 0 -	326,654	(134,069,662)	(1,805,789,399)	(1,805,789,399)	- 0 -	

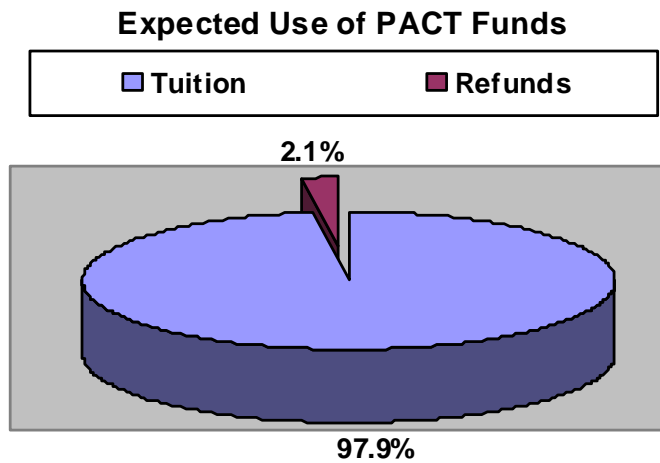
<1> Payments out of Fund include the reversal of liability for "Securities Lending Collateral" as well as other accruals.

VII. EXPECTED USE OF FUNDS

The Fund, which is comprised of contributions, fees and all investment earnings, is expected to pay benefits in the following proportions:

- Tuition payments – 97.9%
- Payments of refunds to contract owners – 2.1%

These results are shown graphically below.



VIII. SENSITIVITY TESTING

We believe that when there is a significant amount of uncertainty about conditions prevailing in the future it is important to test the status of the Fund under other possible assumptions. In particular, we note that our assumptions are not certain due to the volatility of historic results and anticipated future results. Our assumptions were selected to represent our best judgment regarding the future, combined with some conservatism.

The tests given below are not intended to be representative of likely differences between actual events and assumptions; rather they are intended to demonstrate the extent of changes in the Fund's status for a given difference between actual and projected events.

We investigated the effect of variances in inflation, variances in investment yield, variance in bias toward higher-cost institutions and variance in expenses from those anticipated by the reported assumptions. For these projections, we assumed no future contract sales. These scenarios are described below.

- 1) Tuition inflation lower than baseline assumptions by 0.25% every year.
- 2) Tuition inflation higher than baseline assumptions by 0.25% every year.
- 3) Investment yields higher than baseline assumptions by 0.25% every year.
- 4) Investment yields lower than baseline assumptions by 0.25% every year.
- 5) Tuition inflation higher and investment yields lower than baseline assumptions by 0.25% every year.

The deficit for each of these scenarios is shown below.

Sensitivity Testing Results		
Scenario	Actuarial Deficit	Change From Reported
1	(293,548,704)	\$12,697,787
2	(319,201,418)	(\$12,954,927)
3	(293,197,356)	\$13,049,135
4	(319,625,310)	(\$13,378,819)
5	(332,881,863)	(\$26,635,372)

IX. BREAK-EVEN RATES

Another way to characterize the existing deficit is to quantify the rate of investment income or the rate of tuition inflation that would produce break-even (that is, zero-deficit, zero-surplus). The investment break-even rate assumes that inflation remains at 7.25% in all years, while the tuition inflation break-even rate assumes that investment returns will be 8.02% for years.

Investment return break-even rate:	16.35%
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Tuition inflation break-even rate:	(0.77%)
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X. STOCHASTIC ANALYSIS

We have updated the model used for Monte Carlo projections. In the last two years, we used a model in which equity returns were realized as a spread against risk free rates. This year, we have changed our equity return model to a regime-switching model. We believe that this will provide for more a better model of returns and inflation than the previous model.

For domestic equities, our regime switching models retain a connection to the risk-free return through a regression parameter applicable to both regimes. In addition, our regime switching model has a probability of switching regimes that is conditional on the current regime. This differs from the regime-switching models discussed in the financial literature, which have regime switching probabilities which are unconditioned.

As in the prior model, parameters are determined through Bayesian techniques.

Risk-Free Return Model

We modeled risk-free returns according to a lognormal distribution. Technically, we modeled the natural logarithm of the risk free returns as a normal distribution. Modeling the natural logarithm as a normal distribution is exactly equivalent to modeling the underlying value as a lognormal distribution.

Our model for the change in the natural log of the risk free returns is:

$$Y_t = \text{Normal}(\mu_t, \sigma_t)$$

Where:

Y_t is the natural logarithm of the risk-free return for year t

$\mu_t = -3.3 + .8434 (Y_{t-1} + .03538)$ for the high-volatility regime

$\mu_t = -5.711 + .8434 (Y_{t-1} + .03538)$ for the low-volatility regime

$\sigma_t = .3093$ for the high-volatility regime

$\sigma_t = .2833$ for the low-volatility regime

$p_1 = .0304$ This is the probability of moving from the high volatility regime to the low-volatility regime

$p_2 = .6461$ This is the probability of moving from the low volatility regime to the high-volatility regime

Large-Cap Equity Returns

The return model for large-cap equities is a regime-switching model with a regression term based on the change in the risk free returns.

$$Z_t = \text{Normal}(\mu_t, \sigma_t)$$

Where:

Z_t is the return for year t

$\mu_t = .07874 - .2.482 (Y_t - Y_{t-1})$ for the high-volatility regime.

$\mu_t = .12707 - .2.482 (Y_t - Y_{t-1})$ for the low-volatility regime.

Y_t & Y_{t-1} are the risk free returns for the current and prior years respectively.

$\sigma_t = .2147$ for the high-volatility regime

$\sigma_t = .176$ for the low-volatility regime

$p_1 = .7168$ This is the probability of moving from the high volatility regime to the low-volatility regime

$p_2 = .0967$ This is the probability of moving from the low volatility regime to the high-volatility regime

Small-Cap Equity Returns

The return model for small-cap equities is a regime-switching model with a regression term based on the change in the risk free returns and an autoregressive term.

$$X_t = \text{Normal}(\mu_t, \sigma_t)$$

Where:

X_t is the return for year t

$\mu_t = .1834 - .3.655 (Y_t - Y_{t-1}) + .04948 (X_{t-1} - .162353)$ for the high-volatility regime.

$\mu_t = .18416 - 3.655 (Y_t - Y_{t-1}) + .04948 (X_{t-1} - .162353)$ for the low-volatility regime.

Y_t & Y_{t-1} are the risk free returns for the current and prior years respectively.

$\sigma_t = .2329$ for the high-volatility regime

$\sigma_t = .1889$ for the low-volatility regime

$p_1 = .3836$ This is the probability of moving from the high volatility regime to the low-volatility regime

$p_2 = .3512$ This is the probability of moving from the low volatility regime to the high-volatility regime

International Equity Returns

The return model for international equities is similar to the large-cap equity model except that the regression term is based on large-cap returns rather than risk free returns.

$$W_t = \text{Normal}(\mu_t, \sigma_t)$$

Where:

W_t is the return for year t

$\mu_t = .08677 + .5752 * Z_t$ for the high-volatility regime.

$\mu_t = .05855 + .5752 * Z_t$ for the low-volatility regime.

Z_t is the large cap return for the current.

$\sigma_t = .221$ for the high-volatility regime

$\sigma_t = .3166$ for the low-volatility regime

$p_1 = .5987$ This is the probability of moving from the high volatility regime to the low-volatility regime

$p_2 = .1866$ This is the probability of moving from the low volatility regime to the high-volatility regime

Real Estate Returns

We did not have sufficient data on real estate returns to develop a regime-switching model. Real estate returns were modeled simply as a normal distribution with a mean of 0.076 and a standard deviation of 0.16.

Fixed Income Spreads

Our model for fixed income returns is a regime-switching spread against risk-free returns.

$$V_t = \text{Normal}(\mu_t, \sigma_t)$$

Where:

V_t is the spread for year t

$\mu_t = .01998$ for the high-volatility regime.

$\mu_t = .013057$ for the low-volatility regime.

$\sigma_t = .09965$ for the high-volatility regime

$\sigma_t = .0576$ for the low-volatility regime

$p_1 = .8273$ This is the probability of moving from the high volatility regime to the low-volatility regime

$p_2 = .0319$ This is the probability of moving from the low volatility regime to the high-volatility regime

Weighted Average Tuition Inflation

We modeled WAT tuition inflation as regime-switching Beta distributions.

$$U_t = \text{Beta}(\alpha_t, \beta_t)$$

Where:

U_t is the inflation for year t

$\alpha_t = 3.824$ for the high-volatility regime.

$\beta_t = 48.75$ for the high-volatility regime.

$\alpha_t = 7.865$ for the low-volatility regime.

$\beta_t = 97.13$ for the high-volatility regime

$p_1 = .4886$ This is the probability of moving from the high volatility regime to the low-volatility regime

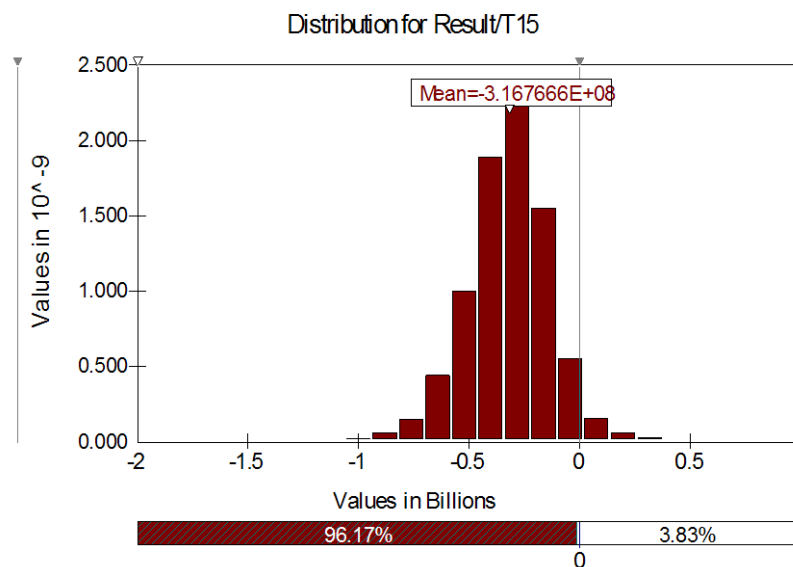
$p_2 = .2491$ This is the probability of moving from the low volatility regime to the high-volatility regime

Correlation of Returns

We assumed correlation of returns based on the Investment Advisor's current market outlook of return correlations.

As in prior years, we ran 10,000 scenarios with varying tuition inflation and investment returns. The results are summarized in the table below and in the chart immediately following.

Proportion of Projections With a Surplus	3.83%	
25% of results are better than:	(199,733,840)	Deficit
50% of results are better than:	(307,435,264)	Deficit
75% of results are better than:	(426,839,040)	Deficit
Best Result	652,468,224	Surplus
Worst Result	(1,655,624,704)	Deficit
Mean Result	(316,911,741)	Deficit



The most important measures from the table above are the Proportion with positive Actuarial Reserve and the 50% Results. The proportion of scenarios resulting in a

surplus was slightly less than 1/25th. This indicates that the Program is unlikely to emerge from the current deficit without significant structural changes or re-capitalization.

The 50% Results measure is a “best-estimate” measure of results. If our assumptions are neither conservative (that is they understate results) nor aggressive (that is they overstate results) then the 50% Results measure should be close to our projected result of (\$306,246,491). The table above indicates that our assumptions are neither aggressive nor conservative when considered in the aggregate.

The Smallest Actuarial Reserve indicates what happens if economic events continue adversely for the lifetime of the current contracts –high tuition increases, coupled with negative returns in the equity market until the end of the projection horizon. On the other hand, the Largest Actuarial Reserve indicates what happens if economic conditions are favorable for the remaining lifetime of the current contracts.

Appendix A – Development of Weighted Average Tuition for Four-Year Schools

Weighted Average Tuition 4-Year Schools – Tuition & Fees

	Annual Tuition & Required Fees @ 15 Hours per Semester								
	2004-05	Increase	2005-06	Increase	2006-07	Increase	2007-08	Increase	2008-09
Alabama A&M University	\$4,050	0.0%	\$4,050	0.0%	\$4,050	11.9%	\$4,530	0.0%	\$4,530
Alabama State University	4,008	0.0%	4,008	0.0%	4,008	12.5%	4,508	21.1%	5,460
Athens State University	3,870	0.0%	3,870	0.0%	3,870	4.7%	4,050	0.0%	4,050
Auburn University	5,068	4.1%	5,278	4.1%	5,496	6.1%	5,836	11.4%	6,500
Auburn University at Montgomery	4,440	4.1%	4,620	2.6%	4,740	5.3%	4,990	11.4%	5,560
Jacksonville State University	4,040	0.0%	4,040	25.5%	5,070	0.0%	5,070	12.4%	5,700
Troy State University< ¹ >	3,946	4.0%	4,104	0.0%	4,104	3.9%	4,264	31.0%	5,590
Troy State University Dothan< ¹ >	4,162	3.8%	4,320						
Troy State University Montgomery< ¹ >	3,920	4.7%	4,104						
University of Alabama	4,630	5.1%	4,864	8.5%	5,278	8.0%	5,700	12.3%	6,400
University of AL at Birmingham	4,204	2.9%	4,324	0.0%	4,324	7.7%	4,658	11.6%	5,198
University of AL at Huntsville	4,516	3.8%	4,688	3.4%	4,848	7.6%	5,216	14.1%	5,952
University of Montevallo	5,394	3.5%	5,584	0.0%	5,584	7.4%	6,000	5.0%	6,300
University of North Alabama	3,798	7.1%	4,068	6.6%	4,338	9.3%	4,740	10.1%	5,220
University of South Alabama	4,060	3.2%	4,190	0.0%	4,190	7.4%	4,500	8.7%	4,890
University of West Alabama	3,846	2.9%	3,958	0.0%	3,958	6.8%	4,228	14.2%	4,830
Totals:	\$4,369	3.3%	\$4,514	4.2%	\$4,703	6.6%	\$5,015	13.0%	\$5,668

<¹> Troy State Dothan and Troy State Montgomery were merged with Troy State University in June 2005.

**Weighted Average Tuition
4-Year Schools - Headcount**

	Resident Enrollment Headcount			Average 05 - 07	Percent Of Total
	Fall '05	Fall '06	Fall '07		
Alabama A&M University	3,996	3,908	3,661	3,855	3.5%
Alabama State University	4,029	3,935	3,980	3,981	3.6%
Athens State University	2,488	2,640	2,934	2,687	2.5%
Auburn University	15,435	15,514	15,663	15,537	14.2%
Auburn University at Montgomery	4,909	4,904	4,955	4,923	4.5%
Jacksonville State University	7,600	7,474	7,634	7,569	6.9%
Troy State University<1>	11,153	12,344	13,038	12,178	11.1%
Troy State University Dothan<1>	0	0	0	0	0.0%
Troy State University Montgomery<1>	0	0	0	0	0.0%
University of Alabama	16,943	18,176	19,343	18,154	16.6%
University of AL at Birmingham	14,528	14,288	13,833	14,216	13.0%
University of AL at Huntsville	5,952	6,033	6,150	6,045	5.5%
University of Montevallo	2,883	2,766	2,746	2,798	2.6%
University of North Alabama	4,692	4,848	4,939	4,826	4.4%
University of South Alabama	10,450	10,178	10,482	10,370	9.5%
University of West Alabama	2,105	2,443	2,746	2,431	2.2%
Totals:	107,163	109,451	112,104	109,573	100.0%

<1> Troy State Dothan and Troy State Montgomery were merged with Troy State University in June 2005. Headcounts for 2003 and 2004 for both merged campuses have been added to those of Troy State University.

Appendix B - Payments by School for Academic Year 2007/08

Alabama Public Four-Year Universities

School	Number of Enrollments	Semester Hours	% of Total Hours	Fees Paid	Tuition Paid	Total of Tuition and Fees Paid	Average Paid Per Semester Hour	
							Actual	Projected
Alabama A&M University	106	1,563	0.70%	11,760.00	223,509.00	235,269.00	150.52	167.17
Alabama State University	101	1,300	0.58%	23,570.00	179,598.00	203,168.00	156.28	167.17
Athens State University	113	1,188	0.53%	13,800.00	131,868.00	145,668.00	122.62	167.17
Auburn University	5,277	67,611	30.23%	0.00	15,333,437.78	15,333,437.78	226.79	167.17
Auburn at Montgomery	655	6,924	3.10%	16,846.66	1,134,452.00	1,151,298.66	166.28	167.17
Jacksonville State University	674	7,051	3.15%	0.00	1,119,492.00	1,119,492.00	158.77	167.17
Troy State University	869	11,160	4.99%	40,403.20	1,788,925.38	1,829,328.58	163.92	167.17
University of Alabama	5,327	74,239	33.20%	0.00	15,706,566.09	15,706,566.09	211.57	167.17
University of Al. - Birmingham	1,527	18,296	8.18%	225,935.88	2,608,449.45	2,834,385.33	154.92	167.17
University of Al - Huntsville	629	7,469	3.34%	0.00	1,365,391.25	1,365,391.25	182.81	167.17
University of Montevallo	615	6,565	2.94%	28,681.50	1,279,470.00	1,308,151.50	199.26	167.17
University of North Alabama	512	7,144	3.19%	127,101.00	978,728.00	1,105,829.00	154.79	167.17
University of South Alabama	943	11,832	5.29%	160,614.00	1,597,463.00	1,758,077.00	148.59	167.17
University of West Alabama	111	1,279	0.57%	4,746.56	195,044.40	199,790.96	156.21	167.17
Grand Total	19,001	223,621	100.00%	653,458.80	43,642,394.35	44,295,853.15	198.08	167.17
Ratio of Actual to Projected								118.49%

Alabama Public Two-Year Colleges

School	Number of Enrollments	Semester Hours	% of Total Hours	Fees Paid	Tuition Paid	Total of Tuition and Fees Paid	Average Paid Per Semester Hour	
							Actual	Projected
Alabama Southern	59	658	1.36%	10,393.00	47,250.00	57,643.00	87.60	92.53
Bevill State	195	1,856	3.83%	31,492.98	133,416.00	164,908.98	88.85	92.53
Bishop State	37	301	0.62%	3,852.00	22,428.00	26,280.00	87.31	92.53
Calhoun State	726	6,432	13.28%	132,336.00	464,330.00	596,666.00	92.77	92.53
Central Alabama	97	1,023	2.11%	16,739.00	74,552.00	91,291.00	89.24	92.53
Chattahoochee Valley State	43	335	0.69%	5,035.00	23,842.00	28,877.00	86.20	92.53
Enterprise-Ozark	133	1,520	3.14%	24,528.25	110,332.75	134,861.00	88.72	92.53
Faulkner State	303	2,739	5.66%	48,158.00	203,423.00	251,581.00	91.85	92.53
Gadsden State	262	2,741	5.66%	49,419.00	194,597.00	244,016.00	89.02	92.53
Jefferson Davis	23	282	0.58%	5,016.00	20,136.00	25,152.00	89.19	92.53
Jefferson State	946	8,536	17.63%	215,432.76	618,995.00	834,427.76	97.75	92.53
Lawson State - Birmingham	83	788	1.63%	18,172.00	57,564.00	75,736.00	96.11	92.53
Lurleen B. Wallace	56	523	1.08%	8,422.62	36,507.89	44,930.51	85.91	92.53
Marion Military Institute	11	178	0.37%	3,382.00	33,000.00	36,382.00	204.39	92.53
Northeast Alabama	44	491	1.01%	6,936.00	36,153.00	43,089.00	87.76	92.53
Northwest Shoals	94	1,029	2.12%	22,832.75	73,747.64	96,580.39	93.86	92.53
Shelton State	586	5,619	11.60%	87,876.00	409,367.81	497,243.81	88.49	92.53
Snead State	164	1,626	3.36%	21,450.00	123,342.00	144,792.00	89.05	92.53
Southern Union State	544	6,036	12.46%	98,381.81	436,148.85	534,530.66	88.56	92.53
Wallace State - Dothan	155	1,430	2.95%	19,570.00	104,999.00	124,569.00	87.11	92.53
Wallace State - Hanceville	316	3,347	6.91%	50,121.81	242,026.00	292,147.81	87.29	92.53
Wallace State – Selma	121	941	1.94%	16,834.00	66,811.00	83,645.00	88.89	92.53
Grand Total	4,998	48,430	100.00%	896,380.98	3,532,968.94	4,429,349.92	91.46	92.53
Ratio of Actual to Projected								98.84%

Alabama Public Technical Colleges

School	Number of Enrollments	Semester Hours	% of Total Hours	Fees Paid	Tuition Paid	Total of Tuition and Fees Paid	Average Paid Per Semester Hour	
							Actual	Projected
Drake State Technical College	28	292	33.22%	4,275.00	20,941.00	20,945.28	71.73	92.53
Reid State Technical College	2	16	1.82%	242.00	1,136.00	1,378.00	86.13	92.53
Trenholm State Tech College	56	571	64.96%	8,298.00	41,043.00	49,341.00	86.41	92.53
Grand Total	86	879	100.00%	12,815.00	63,120.00	75,935.00	86.39	92.53
Ratio of Actual to Projected								93.36%

Summary – All Categories

School	Number of Enrollments	Semester Hours	% of Total Hours	Fees Paid	Tuition Paid	Total of Tuition and Fees Paid	Average Paid Per Semester Hour	
							Actual	Projected
Alabama 4-Year Universities	19,001	223,621	66%	653,458.80	43,642,394.35	44,295,853.15	198.08	167.17
<i>Alabama 2-Year Schools</i>								
Community Colleges	4,998	48,430	14%	896,380.98	3,532,968.94	4,429,349.92	91.46	92.53
Technical Schools	86	879	0%	12,815.00	63,120.00	75,935.00	86.39	92.53
Total 2-Year Schools	5,084	49,309	15%	909,195.98	3,596,088.94	4,505,284.92	91.37	92.53
<i>Out of State Schools</i>								
Community Colleges	247	2,233	1%	16,509.59	198,012.06	214,521.65	96.07	92.53
Technical Schools	133	1,482	0%	9,140.36	203,741.77	212,882.13	143.65	92.53
Public Universities	2,570	32,894	10%	182,019.93	4,989,887.59	5,171,907.52	157.23	167.17
Private Colleges	442	6,064	2%	33,491.45	993,410.54	1,026,901.99	169.34	167.17
Total Out of State	3,392	42,673	13%	241,161.33	6,385,051.96	6,626,213.29	155.28	160.67
<i>Alabama Private Schools</i>								
Community Colleges	10	85	0%	540.96	13,433.27	13,974.23	164.40	92.53
Technical Schools	67	502	0%	3,506.92	79,407.76	82,914.68	165.17	92.53
Universities	50	451	0%	2,212.79	71,141.06	73,353.85	162.65	167.17
Colleges	1,388	19,833	6%	99,946.11	3,097,671.09	3,197,617.20	161.23	167.17
Total Alabama Private	1,515	20,871	6%	106,206.78	3,261,653.18	3,367,859.96	161.37	165.07
Total 4-Year	23,451	282,863	84%	971,129.08	52,794,504.63	53,765,633.71	190.08	167.17
Total 2-Year	5,541	53,611	16%	938,893.81	4,090,683.80	4,816,828.48	89.85	92.53
Grand Total	28,992	336,474	100%	1,910,022.89	56,885,188.43	58,582,462.19	174.11	155.28

Resume of Robert B. Crompton, FSA, MAAA

Bob is a vice-president and consulting actuary in Atlanta office of Actuarial Resources. He coordinates all the services provided to the Board with respect to PACT.

Bob is a leading consultant in the prepaid tuition area. In addition to working with the PACT program, he also currently provides actuarial analysis for over 30% of the prepaid tuition programs in the United States, including:

- Colorado,
- Kentucky,
- Pennsylvania,
- South Carolina and
- West Virginia.

In addition, Bob has also worked with the prepaid tuition programs in Florida, Mississippi and Texas.

Bob's specific assistance to prepaid tuition plans includes the following:

- assisting with plan design;
- assisting with setting appropriate actuarial assumptions;
- developing systems to perform necessary calculations;
- reviewing cash flows for appropriate investment strategy;
- preparing analyses of potential impact of fluctuations in tuition increase, investment income, and change in tax status; and
- presenting results to the program governing bodies.

Bob has published two articles specifically relating to prepaid tuition contracts, "Actuarial Issues for Prepaid Tuition Contracts," which was co-winner of the 1992 Actuarial Education and Research Fund's Practitioners Award and "Financing the Future Generations, An Examination of Prepaid Tuition Plans," published in the American Academy of Actuaries' magazine *Contingencies*.

Bob has over 25 years of actuarial experience. Prior to working at Actuarial Resources, Bob worked at Ernst & Young for 14 years. Bob is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. He has a Bachelor of Science degree in Economics from Harding University.